0280

#2

```
              RAW SEQUENCE LISTING              DATE: 01/02/2002
              PATENT APPLICATION:  US/10/016,505   TIME: 11:24:41

              Input Set : A:\PTO.VSK.txt
              Output Set: N:\CRF3\01022002\J016505.raw
```

ENTERED

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              SEQUENCE LISTING
        4 (1) GENERAL INFORMATION:
C--> 5        (i) APPLICANT: Peter W. Laird, Cindy A. Eads and Kathleen D. Danenberg
     6       (ii) TITLE OF INVENTION: PROCESS FOR HIGH THROUGHPUT DNA METHYLATION
     7                                ANALYSIS
     8      (iii) NUMBER OF SEQUENCES: 54
     9       (iv) CORRESPONDENCE ADDRESS:
    10            (A) ADDRESSEE: Davis Wright Tremaine LLP
    11            (B) STREET: 1501 Fourth Avenue
    12                        2600 Century Square
    13            (C) CITY: Seattle
    14            (D) STATE: Washington
    15            (E) COUNTRY: USA
    16            (F) ZIP: 98101-1688
    17        (v) COMPUTER READABLE FORM:
    18            (A) MEDIUM TYPE: Diskette-3.5 inch, 1.44 MB storage
    19            (B) COMPUTER: PC compatible
    20            (C) OPERATING SYSTEM: Windows 95
    21            (D) SOFTWARE: Word 97
    22       (vi) CURRENT APPLICATION DATA:
C--> 23           (A) APPLICATION NUMBER: US/10/016,505
C--> 24           (B) FILING DATE: 10-Dec-2001
    25            (C) CLASSIFICATION:
    26      (vii) PRIOR APPLICATION DATA:
    27            (A) APPLICATION NUMBER: 09/311,912
    28            (B) FILING DATE: May 14, 1999
    29     (viii) ATTORNEY/AGENT INFORMATION:
    30            (A) NAME: Barry L. Davison
    31            (B) REGISTRATION NUMBER: 47,309
    32            (C) REFERENCE/DOCKET NUMBER: 47675-9
C--> 33       (ix) TELECOMMUNICATION INFORMATION:
    34            (A) TELEPHONE: (206) 628-7621
    35            (B) TELEFAX: (206) 628-7699
    36 (2) INFORMATION FOR SEQ ID NO: 1:
    37        (i) SEQUENCE CHARACTERISTICS:
    38            (A) LENGTH: 19 base pairs
    39            (B) TYPE: nucleic acid
    40            (C) STRANDEDNESS: single
    41            (D) TOPOLOGY: linear
W--> 42      (ii) MOLECULE TYPE: DNA
    43      (iii) HYPOTHETICAL: No
    44       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
    46 GGCGTTCGTT TTGGGATTG          19
    48 (2) INFORMATION FOR SEQ ID NO: 2:
    49        (i) SEQUENCE CHARACTERISTICS:
    50            (A) LENGTH: 24 base pairs
    51            (B) TYPE: nucleic acid
```

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        52          (C) STRANDEDNESS: single
        53          (D) TOPOLOGY: linear
W--> 54     (ii) MOLECULE TYPE: DNA
        55   (iii) HYPOTHETICAL: No
        56     (ix) FEATURE:
        57          (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
        58 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosporamidite-cytosine);
        59 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
        60     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
        62 CGATAAAACC GAACGACCCG ACGA       24
        64 (2) INFORMATION FOR SEQ ID NO: 3:
        65       (i) SEQUENCE CHARACTERISTICS:
        66          (A) LENGTH: 19 base pairs
        67          (B) TYPE: nucleic acid
        68          (C) STRANDEDNESS: single
        69          (D) TOPOLOGY: linear
W--> 70     (ii) MOLECULE TYPE: DNA
        71   (iii) HYPOTHETICAL: No
        72     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
        74 GCCGACACGC GAACTCTAA         19
        76 (2) INFORMATION FOR SEQ ID NO: 4:
        77       (i) SEQUENCE CHARACTERISTICS:
        78          (A) LENGTH: 23 base pairs
        79          (B) TYPE: nucleic acid
        80          (C) STRANDEDNESS: single
C--> 81          (D) TOPOLOGY: linear
W--> 82     (ii) MOLECULE TYPE: DNA
        83   (iii) HYPOTHETICAL: No
        84     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
        86 ACACATATCC CACCAACACA CAA       23
        88 (2) INFORMATION FOR SEQ ID NO: 5:
        89       (i) SEQUENCE CHARACTERISTICS:
        90          (A) LENGTH: 30 base pairs
        91          (B) TYPE: nucleic acid
        92          (C) STRANDEDNESS: single
        93          (D) TOPOLOGY: linear
W--> 94     (ii) MOLECULE TYPE: DNA
        95   (iii) HYPOTHETICAL: No
        96     (ix) FEATURE:
        97          (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
        98 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosporamidite-cytosine);
        99 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
       100     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
       102 CAACCCTACC CCAAAAACCT ACAAATCCAA       30
       104 (2) INFORMATION FOR SEQ ID NO: 6:
       105       (i) SEQUENCE CHARACTERISTICS:
       106          (A) LENGTH: 21 base pairs
       107          (B) TYPE: nucleic acid
       108          (C) STRANDEDNESS: single
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```
       109         (D) TOPOLOGY: linear
W--> 110      (ii) MOLECULE TYPE: DNA
       111     (iii) HYPOTHETICAL: No
       112      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
       114 AGGAGTTGGT GGAGGGTGTT T        21
       116 (2) INFORMATION FOR SEQ ID NO: 7:
       117          (i) SEQUENCE CHARACTERISTICS:
       118              (A) LENGTH: 18 base pairs
       119              (B) TYPE: nucleic acid
       120              (C) STRANDEDNESS: single
       121              (D) TOPOLOGY: linear
W--> 122      (ii) MOLECULE TYPE: DNA
       123     (iii) HYPOTHETICAL: No
       124      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
       126 CTATCGCCGC CTCATCGT       18
       128 (2) INFORMATION FOR SEQ ID NO: 8:
       129          (i) SEQUENCE CHARACTERISTICS:
       130              (A) LENGTH: 22 base pairs
       131              (B) TYPE: nucleic acid
       132              (C) STRANDEDNESS: single
       133              (D) TOPOLOGY: linear
W--> 134      (ii) MOLECULE TYPE: DNA
       135     (iii) HYPOTHETICAL: No
       136      (ix) FEATURE:
       137              (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
       138 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosporamidite-cytosine);
       139 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
       140      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
       142 CGCGACGTCA AACGCCACTA CG        22
       144 (2) INFORMATION FOR SEQ ID NO: 9:
       145          (i) SEQUENCE CHARACTERISTICS:
       146              (A) LENGTH: 30 base pairs
       147              (B) TYPE: nucleic acid
       148              (C) STRANDEDNESS: single
       149              (D) TOPOLOGY: linear
W--> 150      (ii) MOLECULE TYPE: DNA
       151     (iii) HYPOTHETICAL: No
       152      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
       154 CGTTATATAT CGTTCGTAGT ATTCGTGTTT        30
       156 (2) INFORMATION FOR SEQ ID NO: 10:
       157          (i) SEQUENCE CHARACTERISTICS:
       158              (A) LENGTH: 27 base pairs
       159              (B) TYPE: nucleic acid
       160              (C) STRANDEDNESS: single
       161              (D) TOPOLOGY: linear
W--> 162      (ii) MOLECULE TYPE: DNA
       163     (iii) HYPOTHETICAL: No
       164      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
       166 TTATATGTCG GTTACGTGCG TTTATAT        27
```

RAW SEQUENCE LISTING
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```
168 (2) INFORMATION FOR SEQ ID NO: 11:
169         (i) SEQUENCE CHARACTERISTICS:
170             (A) LENGTH: 22 base pairs
171             (B) TYPE: nucleic acid
172             (C) STRANDEDNESS: single
173             (D) TOPOLOGY: linear
W--> 174     (ii) MOLECULE TYPE: DNA
175     (iii) HYPOTHETICAL: No
176         (ix) FEATURE:
177             (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
178 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosporamidite-cytosine);
179 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
180         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
182 CCCGTCGAAA ACCCGCCGAT TA       22
184 (2) INFORMATION FOR SEQ ID NO: 12:
185         (i) SEQUENCE CHARACTERISTICS:
186             (A) LENGTH: 19 base pairs
187             (B) TYPE: nucleic acid
188             (C) STRANDEDNESS: single
189             (D) TOPOLOGY: linear
W--> 190     (ii) MOLECULE TYPE: DNA
191     (iii) HYPOTHETICAL: No
192         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
194 GAACCAAAAC GCTCCCCAT        19
196 (2) INFORMATION FOR SEQ ID NO: 13:
197         (i) SEQUENCE CHARACTERISTICS:
198             (A) LENGTH: 25 base pairs
199             (B) TYPE: nucleic acid
200             (C) STRANDEDNESS: single
201             (D) TOPOLOGY: linear
W--> 202     (ii) MOLECULE TYPE: DNA
203     (iii) HYPOTHETICAL: No
204         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
206 GGGTTGTGAG GGTATATTTT TGAGG        25
208 (2) INFORMATION FOR SEQ ID NO: 14:
209         (i) SEQUENCE CHARACTERISTICS:
210             (A) LENGTH: 28 base pairs
211             (B) TYPE: nucleic acid
212             (C) STRANDEDNESS: single
213             (D) TOPOLOGY: linear
W--> 214     (ii) MOLECULE TYPE: DNA
215     (iii) HYPOTHETICAL: No
216         (ix) FEATURE:
217             (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
218 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosporamidite-cytosine);
219 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
220         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
222 CCCACCCAAC CACACAACCT ACCTAACC        28
224 (2) INFORMATION FOR SEQ ID NO: 15:
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Input Set : A:\PTO.VSK.txt
Output Set: N:\CRF3\01022002\J016505.raw

```
     225        (i) SEQUENCE CHARACTERISTICS:
     226             (A) LENGTH: 22 base pairs
     227             (B) TYPE: nucleic acid
     228             (C) STRANDEDNESS: single
     229             (D) TOPOLOGY: linear
W--> 230        (ii) MOLECULE TYPE: DNA
     231       (iii) HYPOTHETICAL: No
     232        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
     234 CCAACCCACA CTCCACAATA AA        22
     236 (2) INFORMATION FOR SEQ ID NO: 16:
     237        (i) SEQUENCE CHARACTERISTICS:
     238             (A) LENGTH: 19 base pairs
     239             (B) TYPE: nucleic acid
     240             (C) STRANDEDNESS: single
     241             (D) TOPOLOGY: linear
W--> 242        (ii) MOLECULE TYPE: DNA
     243       (iii) HYPOTHETICAL: No
     244        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
     246 AACAACGTCC GCACCTCCT        19
     248 (2) INFORMATION FOR SEQ ID NO: 17:
     249        (i) SEQUENCE CHARACTERISTICS:
     250             (A) LENGTH: 18 base pairs
     251             (B) TYPE: nucleic acid
     252             (C) STRANDEDNESS: single
     253             (D) TOPOLOGY: linear
W--> 254        (ii) MOLECULE TYPE: DNA
     255       (iii) HYPOTHETICAL: No
     256        (ix) FEATURE:
     257             (A) NAME/KEY: 5' substitution with fluorescent reporter dye 6FAM
     258 (2,7-dimethoxy-4,5-dichloro-6-carboxy-fluorescein-phosporamidite-cytosine);
     259 3'substitution with quencher dye TAMRA (6-carboxytetramethylrhodamine).
     260        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
     262 ACCCGACCCC GAACCGCG        18
     264 (2) INFORMATION FOR SEQ ID NO: 18:
     265        (i) SEQUENCE CHARACTERISTICS:
     266             (A) LENGTH: 22 base pairs
     267             (B) TYPE: nucleic acid
     268             (C) STRANDEDNESS: single
     269             (D) TOPOLOGY: linear
W--> 270        (ii) MOLECULE TYPE: DNA
     271       (iii) HYPOTHETICAL: No
     272        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18
     274 TGGAATTTTC GGTTGATTGG TT        22
     276 (2) INFORMATION FOR SEQ ID NO: 19:
     277        (i) SEQUENCE CHARACTERISTICS:
     278             (A) LENGTH: 24 base pairs
     279             (B) TYPE: nucleic acid
     280             (C) STRANDEDNESS: single
     281             (D) TOPOLOGY: linear
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VERIFICATION SUMMARY   DATE: 01/02/2002
PATENT APPLICATION: US/10/016,505   TIME: 11:24:42

        Input Set : A:\PTO.VSK.txt
        Output Set: N:\CRF3\01022002\J016505.raw

L:5 M:220 C: Keyword misspelled or invalid format, [(i) APPLICANT:]
L:23 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:24 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:33 M:220 C: Keyword misspelled or invalid format, [(ix) TELECOMMUNICATION INFORMATION:]
L:42 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=1
L:54 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=2
L:70 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=3
L:81 M:220 C: Keyword misspelled or invalid format, [(D) TOPOLOGY:]
L:82 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=4
L:94 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=5
L:110 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=6
L:122 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=7
L:134 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=8
L:150 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=9
L:162 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=10
L:174 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=11
L:190 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=12
L:202 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=13
L:214 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=14
L:230 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=15
L:242 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=16
L:254 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=17
L:270 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=18
L:282 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=19
L:294 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=20
L:310 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=21
L:322 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=22
L:334 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=23
L:350 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=24
L:362 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=25
L:374 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=26
L:390 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=27
L:402 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=28
L:414 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=29
L:430 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=30
L:442 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=31
L:462 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=32
L:482 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=33
L:502 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=34
L:522 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=35
L:534 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=36
L:546 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=37
L:558 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=38
L:570 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=39
L:582 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=40
L:594 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=41
L:606 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=42
L:618 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=43

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Input Set : **A:\PTO.VSK.txt**
Output Set: **N:\CRF3\01022002\J016505.raw**

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L:630 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=44
L:642 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=45
L:654 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=46
L:666 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=47
L:678 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=48
L:690 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=49
L:702 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=50
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